

What is claimed is:

1. An abrasive array of a plurality of protruding units, each unit having a body composed of at least abrasive grains and a binder, each body having a base and a region most distal from the base, the abrasive array comprising:

5 a plurality of protruding units distributed in two dimensions,
wherein each protruding unit has a base that has a periphery,
wherein, for each unit, its respective distal region, when projected on to a plane that is coplanar with its respective base, falls within the periphery of the base, and defines an offset vector between the projection of the distal region and a center point
10 of the base; and

wherein the offset vectors for the plurality of protruding units do not exhibit a sum that approaches a limit of zero.

15 2. The abrasive array of claim 1, wherein each distal region is linear.

3. The abrasive array of claim 2, wherein each distal region is rectilinear.

4. The abrasive array of claim 2, wherein each linear region is curvilinear.

20 5. The abrasive array of claim 1, wherein each base is a parallelogram.

6. The abrasive array of claim 5, wherein none of the sides of the parallelogram is parallel to an edge of an article upon which the abrasive array is disposed.

25 7. The abrasive array of claim 1, wherein for each unit, its respective distal region, when projected on to a plane that is coplanar with its respective base, falls within the periphery of the base.

8. The abrasive array of claim 1, wherein consecutive bases do not abut.

9. An abrasive article comprising:
a backing having a front and back surface; and
an abrasive coating bonded to the front surface of the backing,
5 wherein the abrasive coating includes a plurality of protruding units distributed
in two dimensions,
wherein each protruding unit has a base that has a periphery,
wherein, for each unit, its respective distal region, when projected on to a plane
that is coplanar with its respective base, falls within the periphery of the base, and
10 defines an offset vector between the projection of the distal region and a center point
of the base; and
wherein the offset vectors for the plurality of protruding units do not exhibit a
sum that approaches a limit of zero.
- 15 10. The abrasive article of claim 9, wherein each distal region is linear.
11. The abrasive article of claim 10, wherein each distal region is rectilinear.
12. The abrasive article of claim 10, wherein each distal region is curvilinear.
- 20 13. The abrasive article of claim 9, wherein each base is a parallelogram.
14. The abrasive article of claim 13, wherein none of the sides of the parallelogram
is parallel to an edge of an article upon which the abrasive array is disposed.
- 25 15. The abrasive article of claim 9, wherein for each unit, its respective distal
region, when projected on to a plane that is coplanar with its respective base, falls within the
periphery of the base.

16. The abrasive article of claim 9, wherein consecutive bases do not abut.